



# Christmas Worksheet 25

## FACTORISATION



This is a free sample of a worksheet available in the Not Just Sums Christmas resource pack 2. For further sample resources (including interactive games) and information about purchasing the full pack for just £10 or two packs for £16, please visit [www.notjustsums.com](http://www.notjustsums.com) or email [admin@notjustsums.com](mailto:admin@notjustsums.com) with your query.

Factorise each of the equations below to find two possible values for x, then fill in those numbers in the grid using the colour specified. You will end up with a festive picture.

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  |
| 19  | 20  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  |
| 37  | 38  | 39  | 40  | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  |
| 55  | 56  | 57  | 58  | 59  | 60  | 61  | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | 71  | 72  |
| 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  | 81  | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  |
| 91  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 |
| 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 |
| 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 |
| 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 |
| 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 |
| 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 |

### Green

$$x^2 - 8x + 15 = 0$$

$$x^2 - 80x + 1599 = 0$$

### Blue

$$x^2 - 154x + 5640 = 0$$

$$x^2 - 154x + 5568 = 0$$

### Pink

$$x^2 - 127x + 4032 = 0$$

### Yellow

$$x^2 - 148x + 5035 = 0$$

$$x^2 - 94x + 1309 = 0$$

$$x^2 - 154x + 5928 = 0$$

$$x^2 - 93x + 2006 = 0$$

### Black

$$x^2 - 173x + 7480 = 0$$

$$x^2 - 197x + 9612 = 0$$

$$x^2 - 173x + 7482 = 0$$

### Red

$$2x^2 - 50x + 168 = 0$$

$$2x^2 - 244x + 4400 = 0$$

$$2x^2 - 252x + 7290 = 0$$

$$2x^2 - 440x + 24038 = 0$$

$$3x^2 - 471x + 14040 = 0$$

$$3x^2 - 537x + 21594 = 0$$

$$3x^2 - 480x + 15312 = 0$$

$$3x^2 - 444x + 14076 = 0$$

$$3x^2 - 480x + 15312 = 0$$

$$4x^2 - 788x + 38808 = 0$$

$$5x^2 - 925x + 42230 = 0$$

$$10x^2 - 500x + 6210 = 0$$

### Brown

$$x^2 = 312x - 24080$$

$$x^2 = 261x - 16988$$

$$x^2 = 282x - 19817$$

$$x^2 = 229x - 13110$$

$$x^2 = 297x - 20246$$

$$x^2 = 375x - 35154$$

$$x^2 = 309x - 23630$$

$$x^2 = 264x - 17343$$

$$x^2 = 327x - 26642$$

$$x^2 = 294x - 21584$$

$$x^2 = 328x - 26847$$

$$x^2 = 225x - 12656$$

$$x^2 = 348x - 29915$$

$$2x^2 = 662x - 54600$$

$$2x^2 = 542x - 36720$$

$$2x^2 = 608x - 45240$$

$$2x^2 = 498x - 30636$$

$$3x^2 = 1038x - 89112$$

$$4x^2 = 1276x - 101400$$

$$5x^2 = 1520x - 115515$$

$$8x^2 = 2544x - 195976$$

$$10x^2 = 3600x - 322560$$

$$20x^2 = 4180x - 201000$$

$$25x^2 = 8725x - 755250$$

$$50x^2 = 11250x - 613800$$